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# The Population of Capernaum

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## 1. Capernaum and the New Testament

The Gospels portray Capernaum as the center of Jesus' ministry. The story in the Sayings Source, commonly labelled Q, of Jesus healing the Centurion's servant in Capernaum is conspicuous: it is the only place in Q where an act or saying of Jesus is located in a specific settlement (Q 7:1, following Lukan versification). The Gospel of Mark also depicts Capernaum as the hub of Jesus' ministry. His first miracle takes place there (Mark 1:21-28), after which Jesus is described as being "at home" (*ἐν οἴκῳ*) in Capernaum (Mark 2:1). Later Mark places Jesus "inside the (his?) house" in Capernaum (*ἐν τῇ οἰκῷ*, Mark 9:33). Matthew describes Capernaum as the place where Jesus "settled down" (*κατώκησεν* Matt 4:13 / Mark 1:21). Matthew also labels Capernaum Jesus' residence, when he has Jesus return "to his own city" (*εἰς τὴν ἴδιαν πόλιν* Matt 9:1 / Mark 2:1). Luke also presupposes that Jesus' ministry centered around Capernaum (Luke 4:23), where he taught in its synagogue,

performed an exorcism, and healed Simon's mother-in-law (Luke 4:31-39). The Gospel of John concurs with the centrality given to Capernaum in the synoptic Gospels: there Jesus remained for a few days after the miracle in Cana (John 2:12); there Jesus healed the Centurion's son (John 4:46); thereto the disciples returned after the feeding of the five thousand (John 6:17); Jesus was sought there by the crowds (John 6:24); and there Jesus taught in its synagogue (John 6:59).<sup>1</sup>

Despite Capernaum's frequent mention in the New Testament—second only to Jerusalem—we are afforded virtually no information about its size, government, or economy. One usually assumes it was involved in the fishing industry (Matt 4:12-22), was large enough to contain a small toll house (Mark 2:14, apparently in Capernaum, see Mark 2:1), and was occupied by a small Roman or Herodian garrison (Matthew 8:5-13 / Luke 7:1-10 / John 4:46-54). The Gospels never mention its size, though the evangelists assume it and its surrounding area were sufficiently populated to produce the ubiquitous crowds that followed Jesus.

In spite of the dearth of evidence in the Gospels, the dubious figures given by Josephus, the lack of epigraphic sources, and the complexity involved in estimating an ancient locale's population from archaeological data, New Testament scholars have wagered numerous guesses on the size of Capernaum at the time of Jesus. The estimates of Capernaum's population present a kind of barometer of scholarly trends. In recent years New Testament scholars have endowed both Galilee and Jesus a more urban and cosmopolitan flavor. A steady increase in the population of Capernaum has accompanied this trend. Capernaum has traditionally been described as a small village, "un village modeste," in Bagatti's words, and estimates of its population hovered around one thousand.<sup>2</sup> More recently scholars have been willing to endow

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<sup>1</sup>Four of the five occurrences of Capernaum in John come from the so-called Signs Source, or Semeia Source, an early source used by John (see "The Signs Gospel," in *The Complete Gospels*, ed. Robert Miller (Sonoma: Polebridge, 1992), 175-194).

<sup>2</sup>Bellarmino Bagatti, "Capharnaum," *MB* 27 (1983), 9. The figure of 1,000 inhabitants is also given in Stanislao Loffreda's tour book *A Visit to Capernaum* (Jerusalem: Franciscan Press, 1972), 20. James Strange estimates a population of at

Capernaum with a larger population. In 1981, J. Strange and E. Meyers estimated the population of Capernaum at 12,000-15,000.<sup>3</sup> J. A. Overman adopted this figure in a recent article on urban Christianity in Galilee.<sup>4</sup> A larger Capernaum coalesces with his conclusion that: "Life in lower Galilee in the first century was as urbanized and urbane as anywhere else in the empire."<sup>5</sup> This trend has continued, and a scholar as astute as H. C. Kee recently declared that we must reckon with a Capernaum of 25,000 inhabitants.<sup>6</sup>

Efforts at re-characterizing Capernaum are driven by various motives. The primary impetus is an attack on the traditional picture of Galilee as a rustic cluster of peasant villages, accompanied by a portrait of an unsophisticated, simple Jesus, untouched by the cosmopolitan forces of Hellenism. On the one hand, scholars accentuating a Cynic flavor to the message and method of Jesus have embraced an urban ethos in Galilee. Sepphoris and Tiberias, two Galilean *poleis*, cities founded along Graeco-Roman lines, help explain the presence of tenants of Graeco-Roman Cynicism in Jesus' message.<sup>7</sup> An impressive population of 15,000 in Capernaum fits nicely into this equation. On the other hand, scholars such as H. C. Kee, J. F. Strange, J. A. Overman, and D. Edwards have stressed the urban character of Galilee devoid of interest in Jesus' alleged Cynicism. Rather, their concern centers around examining certain

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most one thousand in the *Interpreter's Dictionary of the Bible, Supplementary Volume*, eds. Keith Crim et al. (Nashville: Abingdon, 1976), s.v. "Capernaum."

<sup>3</sup> *Archaeology, the Rabbis, and Early Christianity* (Nashville: Abington, 1981), 58.

<sup>4</sup> "Who were the First Urban Christians? Urbanization in Galilee in the First Century," in *SBLSP* in Boston, Annual Meeting of the Society of Biblical Literature 1988, ed. David Lull, no. 29 (Atlanta: Scholars Press, 1988), 160-168.

<sup>5</sup> "Who were the First Urban Christians?", 168. It should be noted that Overman has a broader view of what constitutes a city than just a large population: "... the primary characteristic of a *Polis* is not population or the size of the area, but the political and cultural significance of a certain center. Population is by no means irrelevant, but mere size alone is not a test. Rather, what emerges as crucial is the degree to which these areas appear as political and cultural centers" (162).

<sup>6</sup> "The Import of Archaeological Investigations in Galilee for Scholarly Reassessment of the Gospels" (Paper presented at the annual meeting of the Society of Biblical Literature, Anaheim, CA, November 20, 1989).

<sup>7</sup> See F. Gerald Downing, *Christ and the Cynics* JSOT Manuals 4 (Sheffield: JSOT, 1988), x.

sayings of Jesus within an urban setting. The importance of village-city trade networks to the spread of Jesus' message is also underscored.<sup>8</sup>

A critique of these underlying theses is beyond the scope of this paper. The question posed here is restricted to a single topic, albeit central to determining the ethos of the locale of Jesus' ministry: what was the population size of first century Capernaum?

## 2. Estimating Ancient Populations

In order to estimate Capernaum's size, various approaches to ancient population numbers will need to be critically examined. Various methods have been used to determine such figures, some more successfully than others. The literary sources of antiquity are notoriously unreliable. As early as 1742, David Hume chastised ancient authors for fanciful exaggerations: "With regard to remote times, the numbers of people assigned are often ridiculous, and lose all credit and authority."<sup>9</sup> Josephus, the only ancient author who provides figures for the population of first century Galilee, lacks credibility. Yet his general comments on Galilee, that its inhabitants "have always been numerous," and that "the towns are thickly distributed," deserve a fair hearing (*Bellum Judaicum* III.iii.2<sup>10</sup>). His specific figures, however, are liable to exaggeration and fancy. He notes that "even the villages," which he numbers at 204 in his *Vita* (45), "are all so densely populated that the smallest contains more

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<sup>8</sup>See Douglas Edwards, "The Socio-Economic and Cultural Ethos of Lower Galilee in the First Century: Implications for the Nascent Jesus Movement," in *Studies on the Galilee in Late Antiquity*, ed. Lee Levine (New York: Jewish Theological Seminary, 1992). [This book has just been published, here manuscript pages 1-37].

<sup>9</sup>"Essay XI: Of the Populousness of Ancient Nations," in *Essays, Moral, Political, and Literary*, ed. Eugene Miller (Indianapolis: LibertyClassics, 1985), 422. Hume criticized notions of the superior Golden Age in antiquity, which was viewed as technologically more advanced, culturally more sophisticated, and as having a much larger population. He surveyed population figures provided by ancient authors, and cautioned against accepting their veracity.

<sup>10</sup>Unless noted otherwise, all references to classical literature are to the Loeb Classical Library (Cambridge, MA: Harvard University Press). Translations are my own except where a translator is mentioned by name.

than 15,000 inhabitants" (*BJ* III.iii.2). Inferences from these figures for the population of ancient Capernaum are impossible—to credit Galilee with over 3,000,000 inhabitants is absurd ( $204 \times 15,000$ ).<sup>11</sup>

Epigraphic evidence is more reliable than literary sources. City and town populations have been deduced from epigraphic evidence with a modest degree of success. R. P. Duncan-Jones has demonstrated how to estimate a city's population from inscriptions preserving the financial details of private gifts to citizens.<sup>12</sup> For example, in an inscription prescribing the use of funds for annual athletic games in Siagu, Tunisia, the patron proclaims: "... I wish the remaining 1,000 *denarii* to be distributed to all the citizens at the rate of one *sestertius* per head."<sup>13</sup> The prescribed rate of one *sestertius*, or a quarter of a *denarius*, accounts for 4,000 recipients. Since only males above the age of eighteen were targeted as recipients, Duncan-Jones multiplies 4,000 by a factor of 3.5, to account for what he believes is the ratio of males over eighteen to the remaining population. The total population of Siagu is thus estimated at 14,000 ( $3.5 \times 4,000$ ).

There is no such epigraphic evidence for Capernaum. In fact, the lack of any first century public inscriptions betrays Capernaum's modest stature at that time. Public inscriptions were an important aspect of Graeco-Roman civic life. Proclamations of this or that benefactor were incised on all sorts of accessible surfaces: on pavements, columns, every kind of public building, fountains, and statues—they were the "billboards" of ancient city life.<sup>14</sup>

<sup>11</sup> Anthony Byatt, "Josephus and Population Numbers in First Century Palestine," *PEQ* 105 (1973), 52. Byatt points out the obvious contradiction in Josephus' numbers: The smallest village is said to have 15,000 inhabitants, yet later Japha, the largest village (*Vita* 45), is said to have 17,130 inhabitants; so "... if the *smallest* village contained 15,000 inhabitants, how could the *largest* (Japha) only contain a further 2,130?" (52).

<sup>12</sup> See "City Population in Roman Africa," *Journal of Roman Studies* 53 (1963), 85-90; "Human Numbers in Towns and Town-Organizations of the Roman Empire: The Evidence of Gifts," *Historia* 13 (1964), 199-208; *The Economy of the Roman Empire*, 2nd ed. (Cambridge: Cambridge University Press, 1982), 259-287.

<sup>13</sup> Duncan-Jones, "City Population in Roman Africa," 86.

<sup>14</sup> John E. Stambaugh, *The Ancient Roman City* (Baltimore: The Johns Hopkins University Press, 1988), 141.

Euergetism, the expenditure by private individuals on public building projects, has left its mark on stone in the ubiquitous honorific inscriptions unearthed in towns of the Mediterranean littoral.<sup>15</sup> Although the discovery of such inscriptions rests to a certain extent on the mercy of fate, it is of note that only two honorific inscriptions have been found in heavily excavated Capernaum: both come from inside the later Byzantine synagogue, one on a column and one on a lintel.<sup>16</sup>

The lack of adequate written sources, whether epigraphic or literary, places the burden of determining Capernaum's size squarely on the shoulders of archaeology. Various topographical and archaeological means can gage the population of an ancient site: potential population size can be approximated from the maximum agricultural production of the surrounding area; the available water supply to the site can place parameters on the possible population; the seating capacity of public buildings, such as theaters or amphitheaters, has also been used to infer a city's population; finally, the population can be determined by combining the extent of a site's ancient ruins with the density of living quarters.

Unfortunately, Capernaum's surrounding agricultural area and its potential water supply are of little help in estimating the town's population. Capernaum lies along the Northwest shore of the Sea of Galilee, in a fertile strip of land. Josephus praises this area, "... for there is not a plant which its fertile soil refuses, and its cultivators grow everything ... in addition to its genial air, it is also irrigated by a most fertile spring, which the natives call 'Kapharnaoum'" (*BJ* III.x.8). Fertile soil as well as water are abundant in Capernaum's

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<sup>15</sup>See Peter Garnsey and Richard Saller, *The Roman Empire: Economy, Society and Culture* (Berkeley: University of California Press, 1987), 33-34.

<sup>16</sup>The synagogue of Capernaum is the only known building in Capernaum with such liturgical sponsorship. The Gospel of Luke tells us that the Centurion was the patron of the synagogue in Capernaum (Luke 7:5), even though no synagogue structure has been found dating to the first century, see Stanislao Loffreda, "The Late Chronology of the Synagogue of Capernaum" in *Ancient Synagogues Revealed*, ed. Lee Levine (Jerusalem: The Israel Exploration Society, 1982), 52-56. The inscriptions, one in Greek and one in Aramaic, tell of the assistance from a Herod (Ἡρώδης) and a Halphai (הַלְפָי) in building the synagogue, see E. L. Sukenik, *Ancient Synagogues in Palestine and Greece* (London: The British Academy, 1934), 71-72.

environs. Moreover, Capernaum's sustenance was not restricted to agricultural products, as was the typical town in the Roman world.<sup>17</sup> With harbor facilities on the lake, Capernaum's fishing industry supplemented the dietary needs of its inhabitants, and provided a valuable trade commodity. One would suspect that the surrounding agricultural area, the available water supply, and the fishing industry could support a substantial population in Capernaum. Even so, is 25,000 a reasonable estimate?

A staggering allotment of land would be necessary to sustain a population of 25,000. The annual per *caput* consumption of grain in antiquity is estimated at 250 kg. Thus 6,250,000 kg of grain would be needed for a city of 25,000 ( $25,000 \times 250$ ). A good return on 150 kg of seed per hectare in Galilee's fertile soil could yield a crop of 1,000 kg, of which at least 150 would be set aside for sowing. Thus 7,350 hectares would need to be harvested each year, and given a biennial fallow, 14,700 hectares of total land would be needed, an area of 12 by 12 km. This area's circumference could be drawn from Capernaum northeast to Bethsaïda, northwest to the outskirts of Hazor, southwest over to Meron, and then southeast to the plain of Gennesaret, a remarkable area. For Capernaum to have controlled, either directly or through trade, the produce of such a large area, she would have had to successfully compete in a land battle with the cities of Bethsaïda, Tericheae, and Tiberias. But these figures only set an upper parameter on the population of Capernaum, they provide a good indication of how large Capernaum was not, but none on the actual population of Capernaum.<sup>18</sup>

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<sup>17</sup>See Garnsey and Saller, *The Roman Empire*, 26-34, 64-82.

<sup>18</sup>For the "proxy-data" on crop yields in antiquity and Palestine, see Ayre Ben-David, *Talmudische Ökonomie I* (Hildesheim: Georg Olms, 1974), 106; Garnsey and Saller, *The Roman Empire*, 78-82; and J. K. Evans, "Wheat Production and its Social Consequences in the Roman World," CQ 31 (1981), 432f. See also Magen Broshi, "The Population of Western Palestine in the Roman-Byzantine Period," BASOR 236 (1980), 7; Douglas Oakman, *Jesus and the Economic Question of his Day*, Studies in the Bible and Early Christianity 8 (Lewiston: Edwin Mellon, 1986), 28.

Using the figure of arable land in Palestine of 763,000 hectares given by G. Hammel, "Poverty and Charity in Roman Palestine" (Ph.D. diss., University of California, Santa Cruz, 1983), 473 n. 241 (cited in Oakman, *Jesus and the Economic Question of his Day*, 28), one can arrive at a similar figure by working from the opposite direction. 25,000 inhabitants would be the equivalent of one fortieth of

The seating capacity of the synagogue in Capernaum, on the other hand, is of no help in determining the population of the ancient site for two reasons: For one, the excavated synagogue dates to the Byzantine period, and extreme caution must be urged in inferring anything from a later period for an earlier period. Secondly, the seating capacity of public buildings cannot be correlated directly with a town's size. Public buildings such as amphitheaters or synagogues accommodated people living in a town and its surrounding countryside, and are not an adequate measure of the urban population.<sup>19</sup> Furthermore, in Duncan-Jones' words: "Questions of local wealth and local rivalry may be as important in determining their size as demographic requirements."<sup>20</sup> Thysdrus in Roman Africa boasted an amphitheater seating 60,000, the third largest in the Roman world, but "... Thysdrus itself has no such population as this great structure implies, nor is there any sizable town nearby."<sup>21</sup> The Byzantine synagogue at Capernaum is relatively large.<sup>22</sup> Its main hall, with two tiered benches on at least two sides, encloses an area of 450 m<sup>2</sup>. In contrast, the main halls of some synagogues in

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the entire population of Palestine. This would necessitate access to one fortieth of the arable land, 20,000 hectares, an area of roughly 14 by 14 km! It should be noted that these estimates are conservative and do not include any subtraction for taxes in the form of grain removed from the area of production (for tax rates, see Oakman, *Jesus and the Economic Questions of His Day*, 37-80). By analogy, the area of Pompeii's economic territory was also 14 by 14 km, with a total population of 36,000 for both rural areas and the city of Pompeii. The city of Pompeii itself is estimated to have had between 8,000 and 10,000 inhabitants, see Willem Jongman, *The Economy and Society of Pompeii* (Amsterdam: J. C. Gieben, 1988), 106-107, 112.

<sup>19</sup>The theater at Pompeii had a seating capacity of 12,000. Nero closed it for ten years because of rioting between the citizens of Pompeii and of Nuceria Alfaterna, a city over ten kilometers to the east, clear evidence that the theater was designed for external consumption as well, see Tacitus, *Annals*, xiv.17.

<sup>20</sup>*The Economy of the Roman Empire*, 262.

<sup>21</sup>Tenney Frank et al. eds., *An Economic Survey of Ancient Rome* (Baltimore: The Johns Hopkins Press, 1938), Vol. IV, *Africa, Syria, Greece, Asia Minor*, part I, "Roman Africa" by R. M. Haywood, 112.

<sup>22</sup>For comparative architecture of synagogues, see Marilyn Joyce Segal Chiat, *Handbook of Synagogue Architecture*, Brown Judaic Studies 29 (Chico, CA: Scholars Press, 1982). Only two synagogues listed in Chiat's *Handbook of Synagogue Architecture* have larger main halls: those at Beth Yerah (760 m<sup>2</sup>) and Gaza (780 m<sup>2</sup>).

major Palestinian cities are much smaller: Hamat Tiberias' (A) is 144 m<sup>2</sup>, Caesarea Maritima's is 162 m<sup>2</sup>, and Scythopolis' is only 240 m<sup>2</sup>. But minor villages possess structures which rival the size of Capernaum's main hall: Gamla's measures 320 m<sup>2</sup>, Meron's 375 m<sup>2</sup>, and Beth She'arim's 420 m<sup>2</sup>. Thus seating capacity, measured by the size of the main hall, cannot be correlated with the site's population size. Even though Capernaum demonstrated the fiscal ability to build a large and elegant Byzantine synagogue, made of finely hewn limestone, not the indigenous basalt stones, this ability is indicative of wealth and generosity, not of population size. The relatively large size of the synagogue at Capernaum, like the size of amphitheaters across the Roman Empire, has more to do with the site's economy and civic pride than with its population size.

The best way to determine an ancient town's population is by examining the extent of its ruins and the density of its living quarters. Many archaeologists and ethnographers have noted the direct correlation between population and settlement area.<sup>23</sup> Applying their principles to ancient settlements, population estimates can be made by multiplying the number of hectares of a site by an approximate number of people per hectare. This is the technique used by Meyers and Strange in concluding that Capernaum had a population of between 12,000 and 15,000. They rely on an earlier description of the ruins by Captain Wilson of the British Army, who in 1871 reported that: "The whole area, half a mile in length by a quarter in breadth [750 by 375 meters] was thickly covered with the ruined walls of private houses ...."<sup>24</sup> Thus Meyers

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<sup>23</sup>The basic correlation between population size and settlement area has been demonstrated by various studies. See William M. Sumner, "Estimating Population by Analogy: An Example," in *Ethnoarchaeology: Implications of Ethnography for Archaeology*, ed. Carol Kramer (New York: Columbia University Press, 1979), 168; Norman J. C. Pounds "The Urbanization of the Classical World," *Annals of the Association of American Geographers* 59 (1969), 135-157; Robert M. Schacht, "Estimating Past Population Trends," *Annual Review of Anthropology* 10 (1981), 124-131. D. W. Read, "Towards a Formal Theory of Population Size and Area of Habitation," *Current Anthropology* 19 (1978), 312-317. Yigal Shiloh, "The Population of Iron Age Palestine in the Light of a Sample Analysis of Urban Plans, Areas, and Population Density," *BASOR* 239 (1980), 25-35.

<sup>24</sup>*Archaeology, the Rabbis and Early Christianity*, 58. They cite Capt. R. E. Wilson and Capt. R. E. Warren, *Recovery of Jerusalem: A Narrative of Exploration*

and Strange arrive at an area of just over 30 hectares for Capernaum's ruins. Multiplying the area by a coefficient of 400 to 500 persons per hectare, they estimate a population between 12,000 and 15,000 inhabitants.<sup>25</sup> Two variables however, need to be scrutinized: the extent of the site's ruins, and the type and density of living quarters.

The southern extent of the site's ruins is easily defined by the lake, and the maximum northern extent is determined by several sarcophagi north of the lake. Although there is reason to believe that the level of the lake was lower in antiquity, the remains of an ancient promenade establish a precise boundary to the south. The promenade is also of help in determining the eastern and western boundaries of Capernaum. The harbor facilities connected to the promenade extend some 800 meters along the shore.<sup>26</sup> Two important questions are whether or not the limits of Capernaum coincided with the entire harbor strip, and whether or not the current remains of the harbor strip were in use in their entirety during the first century. Both questions must be answered negatively. The ruins of Capernaum are visibly shorter than the harbor facilities.<sup>27</sup> Furthermore, the easternmost portion of the

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and Discovery in the City and the Holy Land (London: Richard Bentley & Son, 1871), 269, but what I have quoted comes from page 345. I am unsure how to reconcile their statement that "... the lake was higher in antiquity and that ruins extend under the modern level of the water" (58). The ruins could only extend under the current water level if the lake was lower in antiquity.

<sup>25</sup>The coefficient of 400 to 500 is not explicitly stated in Meyers and Strange. It is given by M. Broshi, "The Population of Western Palestine," 1. But Broshi stresses that "this figure represents the maximum density in built-up areas" (1). Furthermore, in his calculations Broshi deduces one quarter of the area to account for "public and open spaces" (5). Yigal Shiloh sets an extraordinarily high coefficient of 400 to 500 for the Iron Age walled cities in Israel ("The Population of Iron Age Palestine," 30).

<sup>26</sup>Mendel Nun, *Sea of Galilee: Newly discovered Harbours From New Testament Days*, revised edition (Ein Gev: Kinnereth Sailing, 1989), 25.

<sup>27</sup>Nun, *Sea of Galilee*, 26. Captain Wilson makes no claim to accuracy, i.e., he is not reporting on a scientific survey. This should be clear from his estimate of the extent of Chorazin's ruins which he says "... cover an area as large, if not larger, than the ruins of Capernaum" (347), and from the oft repeated phrase "about a mile" to describe distances.

ruins do not antedate the 7th century C.E.<sup>28</sup> Excavations on the Greek Orthodox property under the direction of Vassilios Tzaferis have determined that Capernaum's center shifted eastward during the seventh century C.E. After the Persian conquest and Byzantine re-conquest of Palestine "... a new town of entirely different plan was constructed, east of the earlier town. ... Capernaum of the 7th century A.D. lay mostly in previously unsettled areas spreading north and east of the synagogue area."<sup>29</sup> The northernmost and easternmost areas, built-up during a later period, cannot be included in estimations of the population of first century Capernaum. The settled area prior to the Persian conquest is "... limited to a short, narrow strip" along the sea measuring no more than 350 by 500 meters.<sup>30</sup> Thus the *maximum* area occupied by first century Capernaum is 17 hectares (350 x 500 m).

Determining the density of living quarters in Capernaum during the first century is more tenuous than determining the area covered by its ancient ruins. Population density in antiquity rests on the frail assumption that the human numbers correspond to the material remains. Certainty is elusive, since some houses might be abandoned, or some rooms unused, while other houses might be overcrowded, with family members sleeping in the courtyards. Certainty is also elusive because only a fraction of first century Capernaum has been excavated—much of it having vanished as the inhabitants of later periods renovated and rebuilt earlier structures.

### 3. Ancient Analogies: Ostia and Pompeii

Since much of first century Capernaum lies either unexcavated or has been, archaeologically speaking, destroyed, help must be sought elsewhere to estimate the density of living quarters.<sup>31</sup> Assistance by

<sup>28</sup>Vassilios Tzaferis, *Excavations at Capernaum, Volume I 1978-1982* (Wiona Lake, IN: Eisenbrauns, 1989), 216, see also 2-3, 4 (for Area C) and 9 (for Area D).

<sup>29</sup>Tzaferis, *Excavations at Capernaum*, 216.

<sup>30</sup>Tzaferis, *Excavations at Capernaum*, 216. This is close to the area of 200 x 500 m given by the various Franciscan authors. And even here one cannot be entirely sure that the entire area was inhabited during the Roman Period.

<sup>31</sup>For this reason, R. Naroll's method for determining a settlement's population cannot be applied to Capernaum, see "Floor Area and Settlement Population,"

analogy can be found in two excavations of ancient towns whose miraculous state of preservation permits population estimates of some veracity: Ostia, the port city of ancient Rome at the mouth of the Tiber river, and Pompeii, the Italian city covered by Mount Vesuvius' eruption in 79 C.E. Each provides well preserved data for the density of its living quarters. And each has been rather fully excavated. The port city of Ostia was extensively—and rapidly—unearthed between 1938 and 1942 in preparation for a planned international exhibition. Although the Blitzkrieg-like speed of the work destroyed evidence, in Russell Meiggs' words, "... the immediate gain of seeing an almost complete ancient city is for the present generation no mean compensation."<sup>32</sup> Pompeii owes its miraculous state of preservation to the horrific cataclysm of 79 C.E.

Ostia was one of the most densely populated cities in the Roman Empire. Hemmed in by the Tiber and a swamp, the city grew vertically as people were attracted by the opportunities created by the harbor facilities. What the architect Vitruvius said of Rome is also true of Ostia:

In view of ... the unlimited number of citizens, it is necessary to provide dwellings without number. Therefore ... necessity has driven the Romans to have recourse to building high. And so it is that by the use of stone piers, crowning courses of burnt brick and concrete wall, high buildings are raised with several stories, producing highly convenient apartments with views (*De Architectura* ii.8.17).<sup>33</sup>

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*American Antiquity* 27 (1962), 587-89. He suggests that the ratio of the total number of inhabitants to the total enclosed and roofed living space is 1:10 (i.e. one inhabitant per 10 m<sup>2</sup> of such space). The roofed and enclosed space in first Century Capernaum cannot be determined. See the criticisms of Shiloh, "The Population of Iron Age Palestine," 27.

<sup>32</sup>Roman Ostia 2nd ed. (Oxford: Clarendon, 1973), 5.

<sup>33</sup>The translation of Vitruvius is from Meiggs, *Roman Ostia*, 236.

Apartment buildings, *insulae*, in Ostia often exceeded four stories, but were on average three stories high.<sup>34</sup> Examining the city plan of Ostia *insula* by *insula*, J. E. Packer determined that the city's population inside the walls did not exceed 25,000.<sup>35</sup> This estimate should be increased slightly to 30,000 for two reasons: Packer assumes that the unexcavated third of Ostia contains the same proportion of living quarters to public buildings—temples, baths, streets, storage magazines, and a forum. But likely the excavators tended to concentrate on and migrate towards public structures. Thus the unexcavated areas probably have a higher ratio of private residences to public spaces. Furthermore, Packer is overly conservative in assigning only one person to each room, *cubiculum*, and a family of four to each shop, even to large shops with mezzanine floors and back rooms. A population of 30,000 within the entire area enclosed by Ostia's walls (69 hectares), renders a population density of 435 persons per hectare.

Pompeii was a much more typical Italian city. Overshadowed by Mount Vesuvius to the north and overlooking the Bay of Naples to the east, Pompeii owed its prosperity to the fertile soil of Campania, the bread basket of Italy. The city grew in semi-regular geometric patterns into an irregular oval shape. The city walls, which by the first century were heavily decorated and served no defensive

<sup>34</sup> Meiggs, *Roman Ostia*, 240ff, 533. See also Gustav Hermansen, *Ostia: Aspects of Roman City Life* (Edmonton: The University of Alberta Press, 1981), 51 n. 27.

<sup>35</sup> *The Insulae of Imperial Ostia*, Memoirs of the American Academy in Rome XXXI (Rome: American Academy in Rome, 1971), 70 (I have subtracted the 2,000 living outside the Porta Marina which he includes). Packer thus lowers the estimates of Calza (36,000), Girri (37,000), and Meiggs (50-60,000). Calza based his statistics on an arbitrary choice of 18.2 m<sup>2</sup> of living space per person; Girri followed Calza's method but modified the total number upward. Meiggs has argued that the average height of buildings was larger than both had assumed, and that the 18.2 m<sup>2</sup> is an arbitrary, and in his opinion, too low an estimate (532-34). Yet he calls his numbers, 50-60,000, "little more than a guess" (533). Meiggs does not defend his total figure in the book's second edition, but simply challenges Packer's low estimate by noting that Packer underestimates the number of people housed in shops, either on a mezzanine floor or in back rooms. The number of persons living in the *Casette-tipo insulae*—judging from the large size of the latrines—suggests to Meiggs a higher density than one person per *cubiculum* (597-98).

purpose, enclosed an area of ca. 64 hectares.<sup>36</sup> In contrast to Ostia, Nero's new-style architecture of multi-storied apartments (*insulae*) had made little headway in Pompeii: the houses and shops were mostly single or double storied.<sup>37</sup> The vertical urge to accommodate growth in Pompeii was modest. In Grant's words, it was done in "piecemeal fashion," with staircases and upper rooms added unobtrusively to a house's overall plan; the tendency was rather "... for the large old houses to be split up."<sup>38</sup> Rooms facing the street were turned into shops, and mansions were often split into multi-family dwellings. Recent estimates suggest a population between 8,000 and 10,000 for Pompeii.<sup>39</sup> A population of this size within Pompeii's walls (64 hectares), renders a population density of 125-156 persons per hectare, considerably lower than in Ostia.

One would expect the population density of Capernaum to be much closer to that of Pompeii than that of Ostia. Like Pompeii's, most of Capernaum's dwellings were single story. Most of the extant walls and foundations were crudely made of basalt, and could not have supported a second story.<sup>40</sup> Other houses in Capernaum, analogous

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<sup>36</sup>The precise number is uncertain, since on the eastern side the walls were torn down to accommodate new buildings, see Michael Grant, *Cities of Vesuvius: Pompeii and Herculaneum* (New York: Penguin, 1971), 53.

<sup>37</sup>Grant, *Cities of Vesuvius*, 127,

<sup>38</sup>*Cities of Vesuvius*, 127.

<sup>39</sup>Hans Eschebach, *Die städtebauliche Entwicklung des antiken Pompeji*, Römische Abteilungen, 17tes Ergänzungsheft (Heidelberg: F. H. Kerle, 1970), 60-61. Jongman, *The Economy and Society of Pompeii*, 108-112, suggests, on the basis of Pompeii's economic territory that Eschebach's earlier estimate of 8,000-12,000 is plausible, but results in too high a percentage of urban dwellers to rural dwellers for this area in Campania. He does not specify a figure, but his analysis would apparently favor a figure between 7,000 and 10,000 for the city of Pompeii.

J. C. Russell estimates, on the basis of similarity between the Pompeian houses and medieval towns which he has extensively studied, that the population density would be 100 persons per hectare in Pompeii, yielding a population of 6,400. His estimate is, as noted by Jongman, excessively low, since Russell assumes that the social spectrum for medieval society corresponds to Roman society: "Social inequality in the Roman world is likely to have been substantially greater. Many Pompeian poor will not have had their own households, but lived (whether slave or free) in houses of the city's magnates" (111).

<sup>40</sup>Virgilio C. Corbo, "Aspetti Urbanistici di Cafarnao," *Liber Annus* 21 (1971), 272.

to the type found throughout Southern Syria and Northern Galilee, did have a second floor—but certainly not a third, fourth, or fifth as at Ostia. In addition to the courtyard, portions of the ground floor may have been used for stables as well.<sup>41</sup> Unlike either Pompeii or Ostia, there was no city wall to push the population density upward. New buildings could simply be added to the periphery of Capernaum, as was the case during the 7th century C.E.<sup>42</sup>

What, then, was its population size at the time of Jesus? The maximum area covered by the ruins of the early Roman Period can not have exceeded 17 hectares. The population density, based on the type and distribution of buildings, could not have exceeded 150 persons per hectare. *Therefore the total population of Capernaum at the time of Jesus could not have exceeded 2,250 inhabitants.* And very likely, the population was considerably lower: a population coefficient of around 100 persons per hectare is perhaps more reasonable. *An estimate of 1,700 for the population of Capernaum is most reasonable.*<sup>43</sup>

<sup>41</sup>Tzaferis, *Excavations at Capernaum I*, 217, esp. n. 12. Howard Crosby Butler, *Ancient Architecture in Syria, Division II, Section A: Southern Syria* (Leiden: Brill, 1907), 120-123.

<sup>42</sup>Historical comparisons confirm that as a rule walled settlements are more densely populated than open settlements, see Ferki Hassan, *Demographic Archaeology* (New York: Academic Press, 1981), 67, citing especially the study of R. J. Wenke, "Imperial investments and Agricultural Developments in Parthian and Sussanian Khuzistan: 150 B.C. to A.D. 640" (Ph.D. diss., University of Michigan, Ann Arbor, 1975). The massive walled cities of the Bronze Age in Palestine also had higher population densities (around 250 per hectare) as the result of security concerns (Magen Broshi and Ram Gophna, "The Settlements and Populations of Palestine During the Early Bronze Age II-III," *BASOR* 253 (1984), 42,49). Similar estimates (300 persons per hectare) have been made for the walled cites of the Aegean during the Bronze Age, see Colin Renfrew, *The Emergence of Civilization* (London: Methuen, 1972), 251. Iron Age cities in Palestine also had higher population densities (Shiloh, "The Population of Iron Age Palestine." But see Broshi and Gophna's criticism of Shiloh's high number, "The Settlements and Population of Palestine," 51 n. 4). In contrast, rural settlements in Mesopotamia fall well short of 200 persons per hectare" (Robert McC. Adams, *Heartland of Cities: Surveys of Ancient Settlement and Land Use on the Central Floodplain of the Euphrates* (Chicago: The University of Chicago Press, 1981), 350; numbers around 150 are also given by Sumner, "Estimating Population by Analogy," 165-166).

<sup>43</sup>Tzaferis estimates the population between 1,500 and 2,000 (*Excavations at Capernaum I*, 216).

#### 4. Capernaum a Polis?

What does this mean for the study of the Gospels? A population of 1,700 dampens attempts to portray Jesus' base of operations as a thriving Graeco-Roman metropolis. Capernaum was simply not in the same league as Caesarea Maritima, Caesarea Philippi, Jerusalem, the cities of the Decapolis, or the Galilean cities of Sepphoris and Tiberias. In terms of populace, Capernaum was inferior.

But interest in population size is a comparatively recent development. Ancient authors did not use this criterion to determine a settlement's status. Features other than population size mattered in defining a polis, a city. The Greek geographer Pausanias stripped the title of polis from a village in central Greece because it had "no government buildings, no theatre, no agora, no water conducted to a fountain," it was a place "... where the people live in hovels like mountain cabins on the edge of a ravine" (*Description of Greece* 10.4.1). Moses Finley has aptly noted that this

aesthetic-architectural definition was shorthand for a political and social definition: a genuine 'city' was a political and cultural centre, ... a place where the well-born and educated could live a civilized existence, a life of *urbanitas* in Roman parlance, in which they could dominate municipal affairs if no longer the whole gamut of state activities. Mere size was no test: many genuine cities were no bigger than villages in population or area. And the economy did not enter into consideration at all, apart from the requirement that the material goods indispensable for civilized amenities had to be available somehow.<sup>44</sup>

Thus the crucial criterion was that the poleis "... tended to invest a large part of their income in their public buildings, so that these,

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<sup>44</sup>The *Ancient Economy* (Berkeley: University of California Press, 1973), 124, I have used his translation of Pausanius.

rather than economic function, tended to become the criterion of a polis."<sup>45</sup>

Was Capernaum a polis, a city? Many features of urban life are lacking: it had no wall, no aqueduct, no theater, no colonnaded thoroughfares, no administrative complex, no temple. It did, however, according to the Gospels have a synagogue, which in a Jewish context functioned not only as a religious temple, but also as a civic building. The harbor facilities and promenade along the lake, however modest, must also be considered public buildings. And there is evidence for a market area. Capernaum may have aspired to become known as a city, and some of its inhabitants may have called it a city, but surely Pausanias would deny it too the title of a polis.

Yet Matthew (Matt 9:1), Mark (Mark 1:33), and Luke (Luke 4:31) call Capernaum a polis. The Gospels' proclivity for the term is well known. Matthew calls even Nazareth a polis (Matt 2:23); and so does Luke (Luke 1:26; 2:4,39; 4:29), who credits Nain (Luke 7:11,12) and Bethsaïda (Luke 9:10) with this status. John refers to Bethsaïda in Galilee, Sychar in Samaria, and Ephraim in Judea as poleis (John 1:44; 4:5; 11:54). The evangelists are more generous than Pausanias and other Graeco-Roman authors in their use of the term. Their generosity may be attributed in part to ignorance of Palestinian geography, in part to lack of concern for precise definitions, and in part to theological motives—Luke, for example, is concerned to show that “this was not done in a corner” (Acts 26:26).

The two earliest Christian sources that mention Capernaum, the Sayings Source Q and the Signs Gospel used by John, do not call it a polis. The Sayings Source mentions Capernaum twice: in introducing Jesus' healing of the Centurion's son and in Jesus' condemnation of cities (Q 7:1; 10:15). Q does not attach any description to the site, whether as a polis or a village.<sup>46</sup> The Signs

<sup>45</sup> Pounds, “The Urbanization of the Classical World,” 135.

<sup>46</sup> The woes in Q on the three Galilean cities (10:13-15) are preceded by the mission speech (10:2-12), which mentions going to cities (poleis), villages, and houses. But one should not assume that Q therefore thought of Capernaum as a polis.

Gospel also ignores its status—it is simply “Capernaum” (John 2:12; 4:46; 6:17,24). The scribes behind these two sources, who perhaps had personal familiarity with Capernaum and its environs, never elevated its status to that of a polis.

Mark introduces, for the first time, polis as a designation for Capernaum. After narrating a healing on the Sabbath in the Capernaum synagogue and the healing of Simon’s mother-in-law, Mark says that “the entire polis was gathered together at the door” to be healed (Mark 1:33). It is clear that Mark has no interest in preserving the integrity of the term polis—how small must this polis be if it could all fit “at the door”? Mark does not use this term in its proper technical sense as does Pausanias, but rather as part of his dichotomy between inhabited and uninhabited places, a theme carried throughout the first part of his Gospel: the next morning Jesus withdraws to a “lonely place” (Mark 1:35), then after a healing, Jesus “could no longer openly enter a polis, but was out in the country” (Mark 1:45). This city-country dichotomy is repeated in the story of the Gerasene demoniac (Mark 5:14) and in the feeding of the five thousand (Mark 6:32-44).

Neither Matthew nor Luke picked up on Mark’s subtle use of polis as a contrast to uninhabited places when they repeated these Markan verses.<sup>47</sup> They were both not only temporally far removed from the events they describe, they were also likely spatially far removed, so that as far as they knew, Capernaum was a polis. Mark had said so in 1:33. Mark also informed Matthew and Luke that Capernaum had a fishing industry (Mark 1:16), a toll house (Mark 2:14), and at least one public building, the synagogue (Mark 1:21). The Sayings Source Q passed on to Matthew and Luke that Capernaum was large enough to station a Centurion (Q 7:1-10).

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<sup>47</sup>Matthew and Luke break up this Markan dichotomy when they take over Mark 1:32-38. They both delete the term polis from Mark 1:33 (Matt 8:16-17 and Luke 4:40-43). Luke does preserve the phrase “polis and country” in Mark 5:14 word for word (Luke 8:34), which Matthew shortens to just “city” (Matt 8:33). In the feeding of the five thousand (Mark 6:32-44), Matthew mechanically repeats the contrast between a polis and a deserted place (Matt 14:13), while Luke destroys the dichotomy by saying that Jesus and his disciples “withdrew to a polis called Bethsaïda” (Luke 9:10. Note then the problem when the disciples tell Jesus in Luke 9:12 that “we are here in a deserted place”).

It is no wonder that Luke, indeed, calls Capernaum "a polis of Galilee" (Luke 4:31). Luke even embellishes his version of the Centurion story taken from the Sayings Source Q with the civic ideal of liturgical sponsorship of buildings—the Centurion is said to have himself built the synagogue for the Jews of Capernaum (Luke 7:5). Matthew, likewise, unwittingly calls Capernaum Jesus' "own polis" (9:1) and, along with Chorazin and Bethsaïda, the poleis where Jesus did most of his miracles (11:20).

But a Markan inference that Capernaum was a polis, and the later explicit label by Matthew and Luke, should in no way lead us to conclude that Capernaum was a polis proper. Its public building program was meager at best. Its population of 1,700 or less was, relative to the surrounding Galilean cities, modest.

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